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ABSTRACT

Forty-one college students participated in a study designed to gather validity and reliability information on a procedure used to measure communication competence, the Communication Competency Assessment Instrument (CCAI). The study, in confirming operationalization validity, found that self-report measures correlated only slightly with observations of students' actual behaviors, while holistic impressions of competence were wholly consistent with the CCAI ratings. In addition, students' persuasive speech grades and instructors' impressions were found to correlate with the CCAI measure, adding to reification, or convergent validity. Elaboration validity analysis discovered that argumentativeness was unrelated to CCAI scores. However, a relationship existed between apprehension, knowledge, and skill, lending credence to the idea that, along with judgments of behavioral appropriateness, impressions of communication competence are also based on perceptions of motivation and knowledge that manifest themselves in actual communication behavior. References, tables, and a figure showing the Communication Competence Self-Report Scale items are appended. (Author/FL)

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VALIDITY AND RELIABILITY OF THE COMMUNICATION COMPETENCY ASSESSMENT INSTRUMENT

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VALIDITY AND RELIABILITY OF THE COMMUNICATION COMPETENCY ASSESSMENT INSTRUMENT

Abstract

This study reports validity and reliability information on one procedure used to measure communication competence, the Communication Competency Assessment Instrument (CCAI). Conceptualization validation of the CCAI was shown to exist in past research. This study, in confirming operationalization validity, found that self-reported measures correlated only slightly with observations of students' actual behaviors, while holistic impressions of competence were wholly consistent with the CCAI ratings. Also, students' persuasive speech grades and instructors' impressions were found to correlate with the CCAI measure, adding to reification, or convergent validity. Elaboration validity analysis discovered that argumentativeness was unrelated to CCAI scores. However, a relationship existed between apprehension, knowledge, and skill, lending credence to the notion that, along with judgments of behavioral appropriateness, impressions of communication competence are also based on perceptions of motivation and knowledge that manifest themselves in actual communication behavior.

VALIDITY AND RELIABILITY OF THE COMMUNICATION COMPETENCY ASSESSMENT INSTRUMENT

Communication competence is a construct that lacks definitional agreement. Those who view competence as an internal state, separate from performance, find competence difficult to assess (e.g., Chomsky, 1965). Those who focus on assessment, adopt a more narrow, linguistic view of competence (e.g., Palmer, Groot & Trosper, 1981). Current definitions within the field of communication explain competence in terms of both cognitive and behavioral components (Duran & Wheeless, 1980). McCroskey (1982), in adopting the definition of Larson, Backlund, Redmond and Barbour (1978), enlarges this perspective to include cognitive, behavioral and affective components. Spitzberg (1983) and Rubin (1983), likewise argue that communicative competence is comprised of knowledge, skill, and motivation dimensions.

The perspective that has gained the most support thus far views communication competence as an impression of one's own or another's communicative behavior. This impression is based on perceptions of behavioral skills that have proved successful, judgments about motivation or inclination to use these skills, inferences about the knowledge or understanding of communication principles about these skills, and how appropriate the behavior appears within a context. Appropriateness may or may not entail a perception of accuracy or effectiveness. The entire impression of competence is based on actual behavior and, possibly, inferences about the communicator's internal state. The goal of the communication scholar, then, is to understand how people learn to behave in an appropriate manner, how impressions about communication competence are formed, and which skills lead to perceptions of competence within various contexts.

Research focused on the assessment of competence has attempted to specify particular contexts in which communication competence can be found and measured. These include interpersonal (Wiemann, 1977; Bochner & Kelly, 1974), relational (Spitzberg, 1981, 1982, 1983), social (Duran & Wheeless, 1980), rhetorical (Clark & Delia, 1979; Hart, Carlson, & Eadie, 1980), intercultural (Ruben, 1976), organizational (Monge, Bachman, Dillard & Eisenberg, 1982; Harris & Cronen, 1976; Sypher & Sypher, 1981; Walters & Snavely, 1981), mass media (Ploghoft, 1981) and educational (Rubin, 1982a) contexts.

Determining what to examine within these contexts has posed methodological problems. Most of these investigations have focused on the appropriateness of interpersonal and/or public speaking behaviors within the particular context (e.g., Allen & Brown, 1976; Monge, et al., 1982; Rubin, 1982a). Others have tried to operationalize competence by focusing on accuracy (e.g., Krauss & Glucksberg, 1969), effectiveness (e.g., Hale, 1980; Brandt, 1979), or goal attainment (e.g., Wiemann, 1977). The problem with this latter approach is that it becomes a never-ending task to identify the essence of competence, and the new constructs that are created (e.g., accuracy) are unique instances of behavior that involve the researcher's perceptions of competent communication. Focusing on appropriateness, however, allows examination of behavior within a context; this is a more generalized, other-centered approach.

The Validation Model

Cronbach (1971) maintains that one does not validate a test, but "an interpretation of data arising from a specified procedure" (p. 477). The Communication Competency Assessment Instrument (CCAI) is one procedure that measures appropriateness of behavior in a specific context. As stated in the

American Psychological Association's (1974) Standards for Educational and Psychological Tests: "No test is valid for all purposes or in all situations or for all groups of individuals" (p. 31). The CCAI was created as a procedure for providing valid and reliable observations of the appropriateness of college students' communication behaviors within the college setting. It was founded on the premise that these impressions of communicative competence are based on actual behaviors, but inferences about the motivation to communicate and about the students' knowledge of basic communication principles are also relevant.

Earlier reports (Rubin, 1981, 1982a) detailed the development of the instrument and initial face and content validity data. An expert panel initially identified those specific communication skills needed by college students (Bassett, Whittington, & Staton-Spicer, 1978). Since a range of communication situations exist within the college setting (which had to be identified, analyzed, and evaluated), it was important that this range represent the college experience as it relates to learning. An expert panel provided assurance that these competencies sampled the domain of communication in educational contexts, thus providing content validity. In addition, inter-rater reliability was established for a group of nine faculty members (.92) from various fields after a four-hour training session (Rubin, 1982b), and between two raters (.97) after over a month of rating students (Rubin, 1982a). The high inter-rater reliability coefficients were partly due to the anchors provided for each of the five points used in the 19 rating scales.

This initial information on face and content validity and inter-rater reliability allowed for further validation studies. Criterion-referenced validity is concerned with comparing one measurement with another; however, a problem existed in finding valid criterion measurements of communication

competence in educational settings. Concurrent validity was examined and low (but statistically significant) correlations were found between the CCAI and past speaking experience (.31), grade point average (.28), number of credits completed (.35), and number of communication courses completed (.28). Also the listening portion of the CCAI correlated (.69) with a separate listening test (Rubin, 1982a).

Investigations concerned with predictive validity suggest that the CCAI is a useful tool for predicting student teacher success (McCaleb, 1983; Rubin & Feezel, forthcoming). McCaleb, in fact, found that the CCAI demonstrated 88 percent accuracy in predicting which student teachers would perform above or below average on communication performance ratings. Future investigations will most likely explore a student's general ability to succeed in college.

Construct validity is concerned with testing a method or procedure against a theory to see what a test actually measures (Cronbach & Meehl, 1955). This final phase of validation usually occurs over a long period of time (APA, 1974) and the present investigation details the initial stages of this validation process. Campbell and Fiske (1959) have proposed a multitrait-multimethod matrix of construct validity which provides information on convergent and discriminant validation. The underlying assumption of this model is that a test score is a function of both the trait the test measures and the method used to measure it. However, O'Sullivan (1983) has re-conceptualized this model to include four basic stages of validation. The first two deal primarily with conceptual validation, while the latter two are more concerned with empirical validation.

Validation Stages

According to O'Sullivan (1983), the first stage in validating a scale is determining conceptualization validation. That is, on a logical level, is the

construct what is being measured? One can relate the construct to existing literature in an attempt to establish content validity; this has been described elsewhere (Rubin, 1981) as well as earlier in this paper. One can also provide clear and non-redundant terminology for the items. The expert panel that examined the instrument for clarity and lack of bias and found the CCAI to be free from bias and clearly worded (Rubin, 1982b).[1] In addition to a previous expert panel (Rubin, 1982a), this panel, then, evaluated the test for congruence between the construct and the task chosen to measure it, providing conceptualization validation for the CCAI.

The second stage in the O'Sullivan (1983) model is operationalization validation. If there is only one way of measuring a construct, one cannot be sure if the scores are particular to the technique or if they measure a general construct identifiable by other measures. To assess this type of validity, one can produce several different methods or tests, indicate similar measures of the same or a similar construct, elicit different responses to the same stimulus set, or intercorrelate the items on the test to provide an internal consistency measure. Jaccard and Daly (1980) suggest comparisons between self-reported scales and observations of the same behavior.

As reported earlier (Rubin, 1982a) the CCAI began as a 57-item instrument (which can be seen as three versions of the 19-item instrument). The coefficient alpha for the 57-item test was .83. Rather than creating three versions of the test, the item from each group of three that contributed most to the internal consistency of the test was retained in the final version. The internal consistency of the 19-item version was .78. McCaleb (1983), in fact, reports a much higher alpha (.89). However, different responses to the same stimulus set had not yet been collected. Thus, the present study attempts to discover the relationship between the CCAI and: (1) similar measures of the same construct, and (2) different responses to the same

stimulus set. The ultimate purpose of operationalization validation is to determine the best method of measuring the construct.

Reification validation, the multi-method aspect of Campbell and Fiske's (1959) model, seeks to discover if different measures of the construct relate to one another. That is, is there a correlation with other measures of communication competence or with other methods of measuring the construct? The examination of reification or convergent validity is the primary focus of the present investigation. The study seeks to discover if alternative methods used to assess communication competence will produce the same or similar results.

Elaboration validation, the multi-trait aspect of Campbell and Fiske's (1959) model dealing with discriminant validity, demands that variables or constructs not theoretically related to the construct not be empirically related. A previous investigation (Rubin & Henzl, 1982) found no significant relationship between CCAI scores and cognitive complexity, however there was a low correlation with a measure of verbal ability. The latter association is interpreted as concurrent validity since measures of verbal ability are contained in the CCAI.

Communication competence of students is defined as a perception of the appropriateness of students' behaviors in educational settings. The literature on communication competence suggests that the communication competence of students should be somewhat distinct from concepts such as communication apprehension (McCroskey, 1982), argumentativeness (Infante & Rancer, 1982) and students' knowledge (Spitzberg, 1983; Rubin, 1983). However, others (Kelly, 1982) argue that lack of knowledge of appropriate behavior is essentially the reason why apprehension occurs and that both these constructs are manifest in actual behavior. This study, then, examines the role of knowledge and apprehension in perceptions of competence.

Methods

Forty-one student volunteers from a randomly-selected sample of 50 students enrolled in an introductory course at a large midwestern university completed two questionnaires and one behavioral analysis. From a random starting point, the three measures were presented to the subjects in a counterbalanced manner so that order effects would be eliminated.

The behavioral analysis was the Communication Competency Assessment Instrument (Rubin, 1982b). In this procedure, students are asked to give a persuasive speech, listen to a videotaped lecture, answer questions about the lecture, and respond appropriately to questions about communication situations familiar to the student. The behaviors elicited by the various "probes" were assessed by graduate students skilled in the rating technique. Each of the 19 behaviors was rated on a scale ranging from 5 (most appropriate) to 1 (least appropriate). The total score constituted this measure of behavioral appropriateness.

Usually the rater is alone with the student during the administration of the CCAI. However, to provide for a separate measure of assessing students' skills during this interaction, a holistic rating method was used by a second observer to the testing process. This holistic procedure was adapted from Backlund (1981) and the Massachusetts speaking assessment project (Mead, 1980). Raters are asked to assess the students' delivery, organization, content, language, listening skills, and to provide an overall rating of communication competence. To be consistent with the CCAI, a 5-point scale was used, but no accompanying anchor information was provided. Thus, these raters observed the student proceeding through the various portions of the CCAI and gave impressionistic ratings at the end of the testing period.

The two questionnaires students were asked to complete provided information on elaboration and operationalization validation. McCroskey's (1970) 25-item version of the Personal Report of Communication Apprehension (PRCA), a self-report measure, was used to examine the relationship between skill levels and motivation to communicate. Also, the Communication Competence Self Report (CCSR) questionnaire, a 38-item self-report measure of behavioral ability, was created as an alternative method of measuring students' skills. Statements found on the CCSR mirrored the competencies assessed in the CCAI. For each of the CCAI items, one statement on the CCSR described very appropriate behavior, while one described inappropriate behavior (similar to the "5" and "1" categories in the CCAI manual). Students were asked to determine how often (ranging from "always" to "never") each of the statements describes their own behaviors.

The CCSR items were then subjected to coefficient alpha analysis. The alpha for the 38 items was .90. When the least consistent item of each 2-statement pair was eliminated, the coefficient alpha was .87. Statements were recoded so that a high score represented high-skill behavioral appropriateness. Responses to the resultant 19 items were then summed to provide a measure of self-reported communication competence that is consistent with the 19-item CCAI, an other-reported measure. Elements in the final 19-item version of the CCSR are found in Figure 1.

Insert Figure 1 about here

Additional information was also collected on each subject. Earlier in the semester, in a separate study, 34 of the students had completed the argumentativeness scale (Infante and Rancer, 1982). This scale provides a measure of the subject's tendency to approach argumentative situations. It

was hypothesized that students demonstrating high communication skills would not necessarily be more argumentative; however, due to the approach-avoidance nature of both argumentativeness and communication apprehension, argumentativeness was included as a construct, along with apprehension, that should be distinct from actual skill.

Also, each student's instructor was asked to provide a holistic rating of the students' skills in four areas: public speaking, human relations, classroom management, and overall communication skills. The first three of these areas were employed since the 19 items in the CCAI could be used as descriptors, to focus the instructor on particular items to assess. For example, the classroom management area was defined as the student's ability to ask and answer questions, to understand assignments, to summarize instructions for assignments, to distinguish facts from opinions, etc. The fourth area was used as a general assessment of communication skill. Instructors also provided, at a later date, students' examination scores (as a measure of knowledge) and grades given to their persuasive speeches (the speeches were given approximately two weeks after the data collection period). Final course grades were not collected since grading procedures were neither standardized nor uniform and students were allowed to earn extra credit for non-performance activities (e.g., research participation).

Results

Conceptualization validation of the communication competence construct, as measured by the Communication Competency Assessment Instrument, was reported earlier in this paper and elsewhere (Rubin, 1981). This section, therefore, will focus on the operationalization, reification and elaboration validity of the CCAI as a procedure for measuring communication competence.

Operationalization

The first set of analyses examined the operationalization of the communication competence construct. In order to discover if different responses on the same set of stimuli would produce identical or similar results, the scores produced by holistic impression during the administration of the CCAI were compared to the CCAI scores themselves.

As can be seen in Tables 1 and 2, the Pearson correlation between the CCAI and the holistic impression correlation was .75 ($p < .001$); the holistic public speaking item correlated at .62 ($p < .001$) with the first six items of the CCAI (those items pertaining to the extemporaneous persuasive speech). Thus, it appears that different measures of the same stimuli produce consistent results. However, with the reported degree of inter-rater reliability achieved with the CCAI, one should exert caution in advocating a holistic response set since the holistic rating has no anchor points for the evaluation. Also, it would appear unnecessary to consider holistic rating since the time of test administration would remain the same using a holistic or an anchored form of measurement. The anchors serve to increase inter-rater reliability.

Insert Tables 1 & 2 about here

The second set of analyses considered similar measures of the same construct to examine the method of obtaining the judgment of competence. As reported earlier in this paper, the 19-item self-report version (CCSR) of the CCAI was internally consistent (alpha = .87). Alpha levels, however, do not indicate if one instrument is more or less valid than another. As Table 1 indicates, the correlation between the CCAI and the CCSR was .30 ($p < .05$). Table 3 examines each of the 19 items, showing a low level of correlation

between the self- and other-report measures. In fact, only two of the 19 items correlated significantly. Students seemed to have a somewhat accurate view of their ability to express and defend a point of view, but a somewhat inaccurate view of their self-introduction behaviors.

Insert Table 3 about here

This finding is no. surprising. The two self-report measures used in this study (PRCA and CCSR) did show a high degree of correlation (-.62, $p < .001$) indicating something about the nature of self-report vs. other-report measures. Since the CCAI is used to assess skill levels perceived by others (professors, peers, etc.), the other-report measure was most valid for this specific purpose.

Reification

Reification deals essentially with convergent validity. That is, do different measures of the same construct relate to one another? Campbell and Fiske (1959) refer to this as the multi-method aspect of their model. To establish convergent validity, other measures of communication competence should correlate with the procedure in question.

Judgments formed by the students' instructors were used as different measures of the construct. The overall instructor impression (created by summing across the four areas) was found to be internally consistent (alpha = .90). As the data in Tables 1 and 2 indicate, instructor impression correlated with the CCAI at .65 ($p < .001$), while the instructor's perception of the students' public speaking abilities correlated with with speech section of the CCAI at .52 ($p < .001$).

To examine the first relationship in more depth, the instructors' overall impression scores were split at the mean, forming two groups, skilled and unskilled. The mean CCAI scores of the skilled group (M = 70.35) and unskilled group (M = 59.94) differed significantly ($t(39) = 3.86, p < .001$). A similar relationship occurred when overall holistic ratings were split at the mean into skilled (M = 71.00) and unskilled (M = 61.26) groups in relation to CCAI scores ($t(39) = 3.50$, $p < .001$).

Approximately two weeks after administration of the CCAI, persuasive speeches were given in the introductory class (students had not received their persuasive speech assignment at the time the study was conducted). As indicated in Tables 1 and 2, even though the instructors used different speech rating forms and had no anchor points for their ratings, the persuasive speech grades correlated moderately with the CCAI at .51 ($p < .001$) and with the speech section of the CCAI ($r = .40$, $p < .005$).

Elaboration

Elaboration validation is the multi-trait aspect of the Campbell and Fiske (1959) model. In particular, it ascertains whether or not variables or constructs not theoretically related to the construct are empirically related to each other. If they are not, discriminant validity is achieved.

Past research has found that cognitive complexity is unrelated to communication competence and that verbal ability is only slightly related to the CCAI. However, identification of other constructs thought to be unrelated was somewhat difficult (Rubin & Henzl, 1981). No clear relationship between knowledge about communication and communication apprehension (motivation) in communication competence has been established in the past. Since knowledge, motivation and skill have been proposed as three constituent elements of competence (Spitzberg, 1983), it was anticipated that the relationships among

these three constructs would be moderate. Also, it was anticipated that the tendency to argue would not necessarily relate to perceptions of competence.

As shown in Table 1, the correlation between the CCAI and knowledge (average grade on the three exams given in class) was .52 ($p < .001$) and between the PRCA and the CCAI was -.37 ($p < .01$). Little relationship existed between the PRCA and the average exam score ($r = .02$, $p = .44$). Since it appeared that perceptions of students' behaviors (CCAI scores) are related to their knowledge about communication and self-reported apprehension, the CCAI scores were regressed on knowledge and apprehension. As indicated in Table 4, the communication behavior of those students who were high in knowledge and low in apprehension behaved in a way that was evaluated more positively by the raters. The relatively weak correlation between the CCAI and the PRCA strengthens the conception that one is only partially related to the other. Behavior may not accurately reflect apprehension. When controlling for apprehension, the correlation between the CCAI and knowledge increases only slightly ($r = .57$, $p < .001$); and when controlling for knowledge, the correlation between the PRCA and the CCAI also increases only slightly ($r = -.45$, $p < .01$).

Insert Table 4 about here

Further examination of the relationship between apprehension and knowledge was conducted by performing a median split on these variables, producing four groups: high apprehensive/high knowledge, low apprehensive/high knowledge, high apprehensive/low knowledge, and low apprehensive/low knowledge. The mean communication competence scores of these four groups were then compared. Table 5 reports a significant ANOVA where

high knowledge/low apprehensives scored significantly higher on the CCAI than did low knowledge/high apprehensives ($F(3,37) = 3.05$, $p < .05$).

Insert Table 5 about here

Discussion

The goal of this study was to provide information on the validity of the CCAI as a procedure for assessing communication competence in an educational setting. Conceptually, the CCAI has been shown to be a valid instrument. It appears to tap the variety of situations in which students communicate and the items in the instrument represent these situations.

The method of operationalizing the construct, direct observation of communication behavior, is clearly superior to self-report methods. The results indicate that students generally do not perceive their behaviors as others perceive them. When the goal of assessment is to ascertain how others actually view students' skills, the direct observation technique is most appropriate. In fact, the .30 correlation between the CCSR and the CCAI found in this investigation may very well be a function of creating the self-report measure from the CCAI. Other self-report measures of behavior may not correlate as highly with the CCSR as the CCAI did. In particular, scales that combine behavioral items with attitudinal or predispositional items (such as that proposed by Wiemann, 1977) may show even less of a relationship. And since only 41 subjects were assessed in this investigation, the relationship may be even more minimal.

Past research has found the same incongruence between self- and other-report data for different measures (Hewes, Haight, & Szalay, 1976; Norton, 1978). However, Daly (1978) argues that self-reported behaviors are consistent with actual behavioral measures. The behavioral measure Daly used,

though, were actually of the self-report variety and would be expected to correlate with self-report measures.

One interesting outcome of this study is the possibility that some people have more accurate perceptions of their behaviors than others. High self-monitors (i.e., those with a high correlation between CCSR and CCAI) may be able to analyze the outcome of their actions and take the perspective of the other. As Snyder (1979) explains:

> The prototypic High Self-Monitoring Individual is one who, out of concern for the situational and interpersonal appropriateness of his or her social behavior, is particularly sensitive to the expression and self-presentation of relevant others in social situations and uses these cues as guidelines for monitoring (that is, regulating and controlling) his or her own verbal and nonverbal self-presentation. (p. 89)

Snyder's (1974) scale consists of twenty-five statements concerning one's style of self-presentation. Research suggests that high self-monitors are more consistent in their judgments of their behaviors (Snyder, 1974, 1979; Turner, 1980), are better at influencing others and more verbal than low self-monitors (Dabbs, Evans, Hopper & Purvis, 1980), and are more accurate in their ratings (Turner, 1980). Follow-up research is now investigating the relationship between the self-monitoring scale and the self-report measure used here.

Convergent validity also seems to have been established. Instructors' perceptions of students skills are borne out in the CCAI ratings. Use of the contrasting group method of establishing construct validity has shown that masters and non-masters of the skills are differentiated by use of the CCAI. Weiss (1982) previously found the same results; students' advisors sent those

who were thought to be deficient in communication skills for CCAI testing, and all were found to be below average in CCAI skill levels.

Future research efforts in this area might examine the speaking section of the College Outcome Measures Project (COMP) test (Forrest, 1979) in relation to the CCAI, TESOL-type interview methods (Palmer, Groot & Trosper, 1981), tests of communication accuracy or effectiveness (see, e.g., Hale's 1980 use of the tinker-toy test), listening tests (such as the STEP test), or interpersonal skills tests (Wiemann, 1977). Only moderate relationships would be expected, however, since the CCAI is a multi-dimensional instrument that attempts to assess more than one skill. The instrument provides a more comprehensive view or impression of the student's general ability to communicate and listen in interpersonal and public communication situations within the educational context.

The attempt to establish discriminant validity was somewhat successful. The CCAI shows very little relationship to cognitive complexity and to argumentativeness, and a slightly greater relationship to communication apprehension. As predispositional measures, these indices seem to be assessing something other than appropriateness of behavior in a particular situation. One interpretation might be that people do not always behave in ways that conform to their inclinations. Apprehensive individuals may not appear to be apprehensive, cognitively complex individuals may not use their constructs in taking others' perspectives, and argumentative individuals may not always behave in an argumentative manner.

On the other hand, attributions of competence may be based on both observable and non-observable characteristics. Cronkhite and Liska (1980) express the same point of view in their conclusions about impressions of source credibility:

> When one really begins to consider how much information is available on which to make judgments of others, it is easy to see we are not dealing with a process in which impressions must be fabricated from fleeting snatches of experience. There is no question that we sometimes do construct our views of others somewhat independently of what we actually observe, but it is also clear that that does not happen by default. (p. 113)

The source credibility literature is particularly pertinent to the study of communication competence. While competence and trustworthiness are often considered the main dimensions of credibility, perceptions of acceptability are often situation-bound. Cronkhite and Liska's (1980) view of credibility mirrors the definition of competence proposed here, indicating that the same sort of processes are used in these perceptions:

> The conceptualization we have in mind is one in which an individual attributes certain unobservable characteristics to others on the basis of observed characteristics. The individual then evaluates the others by comparing these attributed characteristics to criteria for desirable communicators which have been derived from the needs/goals which are salient in the specific communication situation. (p. 105)

The study also demonstrates the role of knowledge and motivation in the act of behaving in a way that is judged as competent in a particular situation. Since inferences about knowledge and motivation are made when impressions of competence are formed, it is reassuring to see that a relationship does exist. Still, measures of skill do not completely tap knowledge or motivation. Any impression of behavior will, to some degree, assess predispositions. The CCAI is proposed as a valid and reliable method of assessing the behavioral aspect of communication competence; it assesses those skills that are directly observable in the impressions formed of students by others.

Notes

1. Specifically, the four panel members independently determined: (1) that the items addressed the appropriate knowledge base for the competencies; (2) that the probes were clearly worded, they made clear the tasks to be performed, and they were free from extraneous material; (3) that the scenarios were realistic and appropriate for the competencies; (4) that the items had face validity; (5) that the items did not contain any information or stereotypic depictions that could be seen as offensive to any racial, cultural, sexual or religious group; (5) that the items did not portray cultural, racial, sexual or religious groups as unequal in ability or endowment; (6) that the items did not contain clues or information that could be seen as working to the benefit or detriment of any racial, cultural, sexual or religious group; and (7) that the items contained no group-specific language or vocabulary.

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FIGURE 1

COMMUNICATION COMPETENCE SELF-REPORT (CCSR) SCALE ITEMS

I mispronounce a lot of words.

When speaking with someone, the words I use say one thing while my face and tone of voice say something different.

When giving a speech, I speak clearly and distinctly.

When giving a speech, I can be persuasive when I want to be.

When I speak with others, my ideas are clearly and concisely presented.

When giving a speech, I thoroughly express and fully defend my positions on issues.

I am unable to tell whether or not someone has understood what I have said.

I know when I'm hearing a fact and when I'm hearing someone's personal opinion.

When professors make suggestions in class on how I can improve, I understand the suggestions.

I understand the assignments that are given orally in class.

When I tell others about a class lecture I've heard, my version leaves out some important items.

When I have to introduce myself in a class, I am able to fully and concisely describe my interests and let others know who I am.

When speaking with others, I have to ask a question several times, in several ways, to get the information I want.

I have to answer a question several times before others seem satisfied with my answer.

I find it difficult to express my satisfaction or dissatisfaction about a course to the professor.

When I explain something to someone, it tends to be disorganized.

When I give directions to another person, the directions are accurate.

When I try to describe someone else's point of view, I have trouble getting it right.

I am able to give a balanced explanation of differing opinions.

TABLE 1

PEARSON CORRELATES OF THE CCAI, CCSR, KNOWLEDGE AND PRCA

	CCAI	CCSR	KNOWLEDGE	PRCA
CCSR	0.30*			
KNOWLEDGE	0.52***	-0.07		
PRCA	-0.37**	-0.62***	0.02	
INSTRUCTOR	0.65***	0.70***	0.65***	-0.24
HOLISTIC	0.75***	0.22	0.49***	-0.43**
PERS. SPEECH	0.51***	0.02	0.57***	-0.19
ARGUMENTATIVE (N = 34)	-0.02	0.36*	-0.20	-0.39

* $p<.05$ **$p<.01$ ***$p<.001$

TABLE 2

PEARSON CORRELATIONS FOR PUBLIC SPEAKING RATINGS

PUBLIC SPEAKING RATINGS	CCAI SPEECH
INSTRUCTOR'S	0.52***
HOLISTIC	0.62***
PERSUASIVE SPEECH	0.40**

* $p<.05$ **$p<.01$ ***$p<.001$

TABLE 3

PEARSON CORRELATION OF CCAI & CCSR ITEMS

	CCAI M	CCSR M	r
Pronunciation	4.12	3.83	.10
Facial Expression/Tone of Voice	3.88	3.51	.11
Clear Articulation	3.90	3.83	.17
Persuasiveness	3.41	3.83	.12
Clarity of Ideas	3.59	3.61	.13
Defend & Express a Point of View	3.46	3.90	.27*
Recognize Misunderstanding	3.71	3.73	.12
Distinguish Fact from Opinion	3.49	4.02	.22
Understand Suggestions	2.73	3.70	-.03
Identify Class Assignment	3.17	4.00	.23
Summarize	3.02	3.34	.11
Introduce Self to Others	4.07	3.83	-.27*
Obtain Information	3.71	3.49	.03
Answer Questions	3.63	3.78	-.03
Express Feelings	3.53	3.66	.05
Organize Messages	3.41	3.37	.18
Give Directions	2.66	3.95	.13
Describe Another's Viewpoint	3.29	3.54	-.01
Describe Differences of Opinion	2.73	3.56	.21

* $p < .05$ (5 = high skill, 1 = low skill)

TABLE 4

MULTIPLE REGRESSION: KNOWLEDGE AND APPREHENSION AS PREDICTORS OF COMMUNICATION COMPETENCE

	b	t
Knowledge	.53	4.30**
Apprehension	-.38	-3.08*

$F(2,38) = 13.67^{**}$

Multiple R = .65**

$R^2 = .42$

* $p < .005$ ** $p < .0001$

TABLE 5

MEAN COMPETENCE RATINGS

KNOWLEDGE	MOTIVATION	
	Low Apprehension	High Apprehension
High Knowledge	70.33*	68.50
Low Knowledge	64.00	58.00*

F (3,37) = 3.05, $p < .05$

Means with asterisks differ significantly using the Tukey-B procedure ($p < .05$)